APPARATUS AND METHODS FOR PARALLEL PROCESSING OF MICRO-VOLUME LIQUID REACTIONS

ABSTRACT OF THE DISCLOSURE

Disclosed herein are apparatuses and methods for conducting multiple simultaneous micro-volume chemical and biochemical reactions in an array format. In one embodiment, the format comprises an array of microholes in a substrate. Besides serving as an ordered array of sample chambers allowing the performance of multiple parallel reactions, the arrays can be used for reagent storage and transfer, library display, reagent synthesis, assembly of multiple identical reactions, dilution and desalting. Use of the arrays facilitates optical analysis of reactions, and allows optical analysis to be conducted in real time. Included within the invention are kits comprising a microhole apparatus and a reaction component of the method(s) to be carried out in the apparatus.